

TECHNICAL SPECIFICATION FOR SPLIT SYSTEM AIR-CONDITIONING EQUIPMENT

Scope

This specification contains the requirements for the supply of split-system air-conditioners for remote FAA telecommunications and radar installations at various locations throughout the western United States.

General

Air-conditioner shall be split system with indoor fan-coil unit and out-door condenser unit. Fan-coil unit shall be vertical airflow suitable for floor mounting; condenser unit shall be vertical discharge suitable for outdoor pad mounting. The units shall be fully self-contained, factory assembled, piped, and wired; needing only refrigerant charge, connection to line voltage, and controls to be made fully operational by the installing contractor. Air-conditioner shall be composed of Carrier models 40RU and 38AU (indoor and outdoor units, respectively), or equal.

Performance

- a. Air-conditioner shall meet the minimum performance requirements as shown on the equipment schedules.
- b. Performance requirements shall be classified, tested, and rated in accordance with ARI Standard 340/360, *Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment*.

Design

- a. Cabinets shall be designed such that all access for maintenance and service is from no more than three sides. Cabinets shall be constructed of galvanized steel panels.
- b. The evaporator section shall be insulated with minimum ½-inch thick, 2-pound per SF density, foil-faced closed-cell insulation with finished or sealed edges.
- c. Evaporator fan shall be the centrifugal type, double width, double inlet and shall be located to draw air through the coil. Fan shall be belt driven with permanently lubricated ball bearings and vibration isolation. Evaporator coil shall be constructed of copper with aluminum fins.
- d. Condenser shall be air-cooled and capacity matched to the fan-coil unit. Condenser fan shall be direct drive with permanently lubricated ball bearings and vibration isolation. Condenser coil shall be copper with aluminum fins.
- e. Compressor shall be hermetic scroll type with vibration isolation, manual reset high pressure switch, and crankcase heater. Suitable connections for charging and evacuating the system and for measuring high and low side pressures shall be provided.
- f. Refrigerant circuit shall provide two-stage cooling with dual compressors and operate on R-410A refrigerant. Circuit shall contain externally equalized adjustable

thermostatic expansion valve. Controls shall be microprocessor based; provide anti short-cycle timing; and provide operation down to 0°F ambient air temperature through the use of low ambient air control.

- g. Electrical characteristics shall be as shown on the equipment schedules. Wiring and motor overload protection shall be provided in accordance with the NFPA 70, *National Electrical Code*.
- h. Air filtration shall be the equivalent to 2-inch pleated MERV-7 filters.

Accessories

The following factory options or field-installed accessories shall be supplied with each system.

Indoor Unit:

- Condensate overflow switch
- Galvanized steel condensate drain pan
- Condensate trap
- Floor base
- Discharge plenum
- Return air grille
- Thermostat
- One-year warranty

Outdoor Unit:

- Hail guard
- Filter drier (2)
- Liquid-line solenoid valve (2)
- Solenoid relay kit with transformer
- Sight glass (2)
- One-year warranty

Applicable Drawings

DEN-807956-M002	Mechanical Schedules
SLC-901463-M002	Mechanical Schedules